

P2413

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Type of Project: Modify Existing Approved PAR

PAR Request Date: 24-Jul-2015

PAR Approval Date: 03-Sep-2015

PAR Expiration Date: 31-Dec-2018

Status: Modification to a Previously Approved PAR

Root PAR: P2413 **Approved on:** 27-Mar-2014

1.1 Project Number: P2413

1.2 Type of Document: Standard

1.3 Life Cycle: Full Use

2.1 Title: Standard for an Architectural Framework for the Internet of Things (IoT)

3.1 Working Group: Internet of Things (IoT) Architecture (BOG/CAG/IoT Architecture)

Contact Information for Working Group Chair

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Contact Information for Working Group Vice-Chair

None

3.2 Sponsoring Society and Committee: IEEE-SA Board of Governors/Corporate Advisory Group (BOG/CAG)

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Contact Information for Standards Representative

None

3.3 Joint Sponsor: IEEE Computer Society/Cloud Computing Standards Committee (C/CCSC)

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None

3.4 Joint Sponsor: IEEE Consumer Electronics Society/Standards Committee (CES/SC)

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3.5 Joint Sponsor: IEEE Communications Society/Power Line Communications (COM/PLC)

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None

3.6 Joint Sponsor: IEEE Communications Society/Standards Development Board (COM/SDB)

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4.1 Type of Ballot: Entity

4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 04/2016

4.3 Projected Completion Date for Submittal to RevCom: 05/2017

5.1 Approximate number of entities expected to be actively involved in the development of this project: 15

5.2 Scope: This standard defines an architectural framework for the Internet of Things (IoT), including descriptions of various IoT domains, definitions of IoT domain abstractions, and identification of commonalities between different IoT domains.

The architectural framework for IoT provides a reference model that defines relationships among various IoT verticals (e.g., transportation, healthcare, etc.) and common architecture elements. It also provides a blueprint for data abstraction and the quality "quadruple" trust that includes protection, security, privacy, and safety." Furthermore, this standard provides a reference architecture that builds upon the reference model. The reference architecture covers the definition of basic architectural building blocks and their ability to be integrated into multi-tiered systems. The reference architecture also addresses how to document and, if strived for, mitigate architecture divergence. This standard leverages existing applicable standards and identifies planned or ongoing projects with a similar or overlapping scope.

5.3 Is the completion of this standard dependent upon the completion of another standard: No

5.4 Purpose: The Internet of Things (IoT) is predicted to become one of the most significant drivers of growth in various technology markets. Most current standardization activities are confined to very specific verticals and represent islands of disjointed and often redundant development. The architectural framework defined in this standard will promote cross-domain interaction, aid system interoperability and functional compatibility, and further fuel the growth of the IoT market. The adoption of a unified approach to the development of IoT systems will reduce industry fragmentation and create a critical mass of multi-stakeholder activities around the world.

5.5 Need for the Project: This standard will help to reduce current fragmentation in the various IoT verticals. By addressing the need for an IoT architectural framework, IEEE will fulfill its mission to benefit humanity by increasing the interoperability and portability of IoT solutions to both the industry and the end consumer.

5.6 Stakeholders for the Standard: Consumers, service providers, utilities, equipment manufacturers, automotive manufacturers, transportation providers, and ICT infrastructure providers

Intellectual Property

6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?: No

6.1.b. Is the Sponsor aware of possible registration activity related to this project?: No

7.1 Are there other standards or projects with a similar scope?: Yes

If Yes please explain: There are projects related to IoT reference architectures being developed in other organizations, such as ISO/IEC JTC 1 Special Working Group 5 (Internet of Things) and Working Group 7 (Sensor Networks), oneM2M (<http://www.onem2m.org/>), ITU-T, IETF, and W3C.

and answer the following

Sponsor Organization: ISO/IEC

Project/Standard Number: JTC1

Project/Standard Date: 01-Jan-2013

Project/Standard Title: JTC1

7.2 Joint Development

Is it the intent to develop this document jointly with another organization?: No

8.1 Additional Explanatory Notes (Item Number and Explanation): With this modified PAR, two joint sponsors are being added.